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North Slope, Greater Prudhoe Bay, Alaska

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Good morning and thank you for inviting me to testify today. My name is Lois Epstein and I am an Alaska- and Maryland-licensed engineer and an oil and gas industry specialist with Cook Inletkeeper in Anchorage, Alaska. Cook Inletkeeper is a nonprofit, membership organization dedicated to protecting Alaska's 47,000 square mile Cook Inlet watershed, and a member of the Waterkeeper Alliance of 150+ organizations headed by Bobby Kennedy, Jr. My background in pipeline safety includes membership since 1995 on the U.S. Department of Transportation's Technical Hazardous Liquid Pipeline Safety Standards Committee which oversees the Pipeline and Hazardous Materials Safety Administration's (PHMSA's) oil pipeline activities and rule development, testifying before Congress in 1999, 2002, 2004, and 2006 on pipeline safety, and researching and analyzing the performance of Cook Inlet's 1000+ miles of pipeline infrastructure by pipeline operator and type.¹ I have worked on environmental and safety issues for over 20 years for two private consultants, the U.S. Environmental Protection Agency, Environmental Defense, and Cook Inletkeeper.

Additionally, I am a part-time consultant for the Pipeline Safety Trust, located in Bellingham, Washington, and my testimony today reflects both Cook Inletkeeper and the Pipeline Safety Trust's views. The Pipeline Safety Trust came into being after the 1999 Olympic Pipe Line tragedy in Bellingham, Washington which left three young people dead, wiped out every living thing in a beautiful salmon stream, and caused millions of dollars of economic disruption to the region. After investigating this tragedy, the U.S. Department of Justice (DOJ) recognized the need for an independent organization which would provide informed comment and advice to both pipeline companies and government regulators and the public with an independent clearinghouse of pipeline safety information. The federal trial court agreed with DOJ's recommendation and awarded the Pipeline Safety Trust \$4 million that was used as an initial endowment for the long-term continuation of the Trust's mission.

As is well-known now because of BP's recent pipeline problems on the North Slope of Alaska, releases from low-pressure (also known as low-stress²) liquid pipelines can have serious, adverse environmental and economic consequences. These consequences can be nearly eliminated with adequate federal pipeline safety requirements and enforcement. Investing in pipeline safety pays off in nationwide environmental and economic benefits.

PHMSA has jurisdiction over BP's pipelines, however BP's so-called "transit" pipelines currently are exempt from federal regulation, which means that other pipelines like BP's have no federal corrosion prevention requirements, no smart-pigging (or equivalent) requirements, and no federal inspectors checking on operations. Based on information PHMSA presented at the September 7 House Energy and Commerce hearing,

¹ *Lurking Below: Oil and Gas Pipeline Problems in the Cook Inlet Watershed*, Lois Epstein, Cook Inletkeeper, 2002, 28 pp. plus appendices, and follow-up reports in 2003 and 2005. [See www.inletkeeper.org/pipelines.htm](http://www.inletkeeper.org/pipelines.htm).

² "Low-stress pipeline means a hazardous liquid pipeline that is operated in its entirety at a stress level of 20 percent or less of the specified minimum yield strength of the line pipe." (49 CFR 195.2)

there were a very large number, i.e., over 180, locations of wall thinning from corrosion on BP's Eastern Operating Area "transit" pipeline. If this pipeline were regulated, these locations of wall thinning would have been discovered and repaired before now under 49 CFR 195.452, which would have avoided any supply disruption. Based on the BP Prudhoe Bay situation alone, there are strong technical and economic reasons to regulate low-pressure transmission pipelines.

BP's March spill of 200,000-plus gallons, the largest spill ever on the North Slope of Alaska, contaminated several acres; fortunately, this spill did not significantly contaminate flowing surface waters which could have carried the crude oil a much longer distance. Nevertheless, the environmental damage was extensive and costly to remediate, as shown in the two photos below.



Photo 1: Oil recovery efforts, March 13, 2006, Unified Command photo.

The spill, along with a second BP spill and extensive corrosion discovered following a PHMSA-mandated "smart pig" run to search for wall thinning on a similar pipeline in early August of this year, led to BP's decisions to shut-down all – and later, part – of its Prudhoe Bay production. Among the economic costs, the state of Alaska lost \$6.4 million in royalties and taxes for each day the entire oil field was shut-down.³ Additionally, there was a noticeable spike in the price of crude oil for several days following BP's initial announcement, raising oil costs for both industry and the public.⁴

³ "Murkowski institutes hiring freeze after shutdown," Matt Volz, *Anchorage Daily News*, August 9, 2006.

⁴ "BP shutdown sparks oil rise," Sheila McNulty, *Financial Times*, August 8, 2006.



Photo 2: Oil recovery efforts, August 6-8, 2006, Unified Command photo.

Note that this is not the first time that a pipeline release has resulted in significant economic costs to the public. Following the August 19, 2000 rupture of an El Paso Natural Gas Pipeline, natural gas prices rose significantly in California.⁵

The BP North Slope situation this year also demonstrated:

1. The value of smart-pigging pipelines. Even though BP's operators believed its "transit" pipelines were low-risk, smart-pigging demonstrated otherwise. Smart pigging is an excellent check on the effectiveness of pipeline corrosion and damage prevention operations since the pigs examine the entire circumference of pipelines for wall thinning.
2. The need for federal oversight of pipelines. BP clearly treated its non-federally regulated "transit" pipelines differently than those transmission pipelines that were regulated, with troubling results. When U.S. DOT surveyed pipeline operators in 1992, it found that 84% of the unregulated low-pressure pipeline

⁵ "With the disruption to flow along one segment of the El Paso system, gas prices in southern California soared at least temporarily, but a combination of market adjustments avoided the occurrence of widespread shortages," *A Look at Western Natural Gas Infrastructure During the Recent El Paso Pipeline Disruption* Energy Information Administration (undated). See <http://tonto.eia.doe.gov/FTP/ROOT/natgas/elpaso.pdf>, p. 7.

mileage nationwide was not operated in compliance with the requirements of 49 CFR 195.⁶

History of the Exemption. The following timeline shows actions the federal government has taken and not taken to address the low-pressure pipeline exemption.

- 1969: All low-pressure pipelines exempted from regulation.
- 1988: National Association of Pipeline Safety Representatives (state pipeline regulators) sends the U.S. DOT a resolution asking that the low-pressure exemption be eliminated.⁷
- 1990: U.S. DOT asks for comments on “whether and to what extent” to remove the low-pressure exemption from its regulations.⁸
- 1992: Congress passes the Pipeline Safety Act of 1992 (Pub. L. 102-508) and directs U.S. DOT not to exempt pipelines from its regulations “only because the facility operates at low internal stress.”⁹
- 1992: Volpe National Transportation Systems Center issues a report for U.S. DOT¹⁰ estimating that there are 20,000 miles of onshore rural gathering lines and 22,000 miles of unregulated low-pressure transmission pipelines. The Volpe study also estimated that 38% of the 22,000 miles (nearly 7,000 miles) were near a populated area or a navigable waterway (leaving 15,000 miles of low-pressure transmission pipelines unregulated.)¹¹

⁶ *Economic Evaluation of Regulating Certain Hazardous Liquid Pipeline Operating at 20% or Less of Specified Minimum Yield Strength*, Deanna Mirsky of EG&G/Dynatrend and The Hazardous Materials Transportation Special Projects Office, Volpe National Transportation Special Projects Office, July 21, 1992, p. 8.

⁷ Resolution 1988-1-P1, 20 Percent SMYS, sent to U.S. DOT on August 4, 1988.

⁸ See 55 Federal Register 45822 (October 31, 1990).

⁹ See 49 USC 60102(k).

¹⁰ *Economic Evaluation*, *op. cit.*

¹¹ In its Notice of Proposed Rulemaking (NPR) published in the Federal Register on September 6, 2006, however, PHMSA used industry data – *which includes irrelevant offshore gathering line information and gathering lines too small to be regulated* – to estimate that only 5,000 miles of low-pressure transmission pipeline currently are unregulated. In section 6.1.1 of the Regulatory Evaluation for this NPR (U.S. Department of Transportation Docket Number [RSPA-2003-15864-36](#)), PHMSA says it used the Association of Oil Pipe Lines’ “Pipeline 101” estimate of 35,000 miles of gathering line mileage which includes onshore and offshore gathering lines and gathering lines as small as 2” in diameter. Section 6.1.2 of the Regulatory Evaluation describes how PHMSA subtracted these 35,000 miles from the approximately 40,000 miles of unregulated pipelines and concluded that there are only 5,000 miles of unregulated, low-pressure transmission pipelines (i.e., disregarding the fact that the 35,000 mile figure contains significant offshore and small diameter gathering line mileage).

- 1993: Notice of Proposed Rulemaking applying pipeline standards to low-pressure transmission pipelines that traverse a populated area or a navigable waterway. U.S. DOT deferred a decision on regulation of low-pressure lines in environmentally sensitive areas awaiting its development of a definition of environmentally sensitive areas.¹²
- 1994: Final rule applying pipeline standards to low-pressure transmission pipelines located in non-rural areas and areas currently used for commercial navigation.¹³
- 2006: American Petroleum Institute and the Association of Oil Pipe Lines submit a proposal in June to PHMSA identifying which low-pressure pipelines should be regulated and to what extent (i.e., not requiring that all of 49 CFR 195 apply).¹⁴
- 2006: U.S. House of Representatives Committee on Transportation and Infrastructure marks-up H.R. 5782 in July, closely tracking industry's proposal identifying which low-pressure pipelines should be regulated. U.S. House of Representatives Energy and Commerce Committee holds a hearing later in July on a Discussion Draft for the reauthorized pipeline safety law which does not include details on which low-pressure pipelines should be regulated.
- 2006: Notice of Proposed Rulemaking applies *limited* pipeline standards to low-pressure transmission pipelines and gathering lines within ¼ mile of “unusually sensitive areas,” which represent only 17% of the unregulated transmission and gathering pipeline universe according to the NOPR and 14% of the unregulated transmission pipeline universe.¹⁵ Using the figure of 15,000 unregulated miles developed by the Volpe Center, however, less than 5% (684 miles of 15,000 miles) of the low-pressure transmission pipeline universe would be regulated under the NOPR.

Today, 18 years after state pipeline regulators asked U.S. DOT to remove the exemption covering low-pressure pipelines entirely, PHMSA last week proposed to regulate an incremental sliver of the unregulated low-pressure transmission pipeline universe. This means that many, many miles of low-pressure transmission pipelines remain unregulated and susceptible to BP-like problems with their corresponding, adverse environmental and economic consequences. And PHMSA will never even know about most such problems because unregulated pipelines need not report their releases to U.S. DOT – out of sight, out of mind.

¹² See 58 Federal Register 12213 (March 3, 1993).

¹³ See 59 Federal Register 35465 (July 12, 1994).

¹⁴ U.S. Department of Transportation Docket Number [RSPA-2003-15864-22](#).

¹⁵ See 71 Federal Register 52515 (September 6, 2006).

Technical Deficiencies of the 2006 NOPR. In developing its 2006 NOPR, U.S. DOT ignored technical and other information provided it by public interest organizations – and the proven efficacy of smart-pigging – and instead moved forward with industry's proposal substantially intact. This reactive, pro-industry posture must change to one where federal regulation is pro-active and prevents pipeline problems before they happen. Sadly, the NOPR represents how the pipeline office operated prior to 2000 until several tragic pipeline accidents forced it to improve its regulations substantially.

First, Cook Inletkeeper and the Pipeline Safety Trust strongly oppose identifying regulated pipelines using the buffer zone methodology proposed by industry and then by PHMSA. We believe all low-pressure pipelines deserve federal regulation and those that could affect “High Consequence Areas” (as defined in 195.450) should meet federal integrity management requirements (49 CFR 195.452).

Second, in an unprecedented action, PHMSA’s proposal requires regulated low-pressure transmission pipelines to meet much weaker standards than other transmission pipelines, including other low-pressure transmission pipelines. As of 1994, U.S. DOT regulates low-pressure, non-rural pipelines and low-pressure pipelines near commercially navigable waterways and these lines must comply with all 49 CFR 195 standards.

Third, while Cook Inletkeeper and the Pipeline Safety Trust will submit more detailed comments to PHMSA on the 2006 NOPR, Congress needs to know now that PHMSA’s proposed rule is a patchwork of requirements taken from 49 CFR 195 with no credible evidence that such requirements will decrease releases significantly. For example, the proposed standards reduce six pages in the Code of Federal Regulations on pipeline integrity management (49 CFR 195.452) including required use of smart pigs (or equivalent) to one unenforceable paragraph stating that pipeline operators “may” choose to use smart pigs (or equivalent).¹⁶ Additionally, the proposed standards for regulated gathering lines do not include any type of integrity management whatsoever.

Last, the proposal makes clear that the costs for compliance with a more comprehensive regulatory scheme would not be large, especially given the high costs to society when pipelines fail. PHMSA predicts that its proposal will cost operators only \$17 million,¹⁷ a relatively small amount given the *likely higher costs to society* from higher fuel costs, lost taxes, cleanup costs (including governmental oversight), etc. when pipelines like BP’s fail.

State of Alaska’s Role. Current PHMSA interpretation of the pipeline safety law gives federal authority to pipelines following separation of crude oil, natural gas, and produced water (contaminated water that comes up from underground during oil or gas production). Pipelines prior to separation facilities thus are regulated only by states.

¹⁶ See 71 Federal Register 52519 (September 6, 2006), proposed section 195.12(b)(10).

¹⁷ See 71 Federal Register 52515 (September 6, 2006).

BP's faulty pipelines on the North Slope contain only crude oil so they fall under both state and federal jurisdiction.

The Alaska Department of Environmental Conservation (ADEC) regulates BP's faulty pipelines under its "crude oil transmission pipeline" requirements.¹⁸ Current ADEC requirements are not specific enough to prevent the corrosion which occurred, however ADEC's general oil pollution prevention authorities¹⁹ would have allowed inspectors to require pipeline operators to take steps to prevent corrosion-related oil discharges.

Following the BP Prudhoe Bay shut-down in August, Governor Murkowski's Administration proposed reorganizing the state's oversight of pipelines and giving the state Department of Natural Resources (DNR) the lead role. Cook Inletkeeper believes that because DNR primarily is a resource-development agency, this poorly designed reorganization plan will do nothing to increase the state's ability to prevent corrosion and should be dismissed.

Other Recommendations. In addition to improving pipeline safety regulation of low-pressure pipelines as discussed above, Cook Inletkeeper and the Pipeline Safety Trust recommend that Congress consider adopting the following measures to minimize the likelihood of a significant polluting and/or supply disruption event on Alaska's North Slope or the Trans-Alaska Pipeline System (TAPS):

- Authorize, perform, and implement the recommendations of an independent audit of the maintenance and operation practices of all North Slope oil and gas facilities; and,
- Create a Citizens' Oversight Group, modeled after the Prince William Sound Regional Citizens' Advisory Council (created after the *Exxon Valdez* oil spill, which would receive dedicated industry funds to serve as an independent watchdog over North Slope and TAPS operations.

Additionally, Congress should implement strategies that:

- Harness clean, renewable, and homegrown, energy sources like properly-sited wind, solar, tidal, and farm-based bio-fuels; and
- Reduce our nation's dependence on oil through increased efficiency and conservation.

¹⁸ 18 AAC 75.055.

¹⁹ For example, 18 AAC 75.005, Responsibility states: The owner or operator of an oil tank vessel, oil barge, pipeline, oil terminal, railroad tank car, exploration facility, or production facility subject to the requirements of AS 46.04.030 or AS 46.04.055 (j) is responsible for meeting the applicable requirements of this chapter and *for preventing the discharge of oil into waters or onto land of the state* (emphasis added).

Last, Congress should consider the difficulty of preventing oil and gas-related releases before making sensitive onshore (e.g., the Arctic National Wildlife Refuge) or offshore environments available for oil and gas drilling.

Conclusion. Oil pipeline releases can have serious, adverse environmental and economic consequences. These consequences can nearly be eliminated – and certainly can be significantly reduced – with adequate federal pipeline safety requirements and enforcement. Investing in pipeline safety pays off environmentally and economically.

Adequate federal pipeline safety requirements and enforcement are the key, however. PHMSA's current proposal deserves aggressive Congressional questioning, and it will receive strong, negative public comments. The proposed standards cover so few pipelines and are so technically deficient and biased toward industry's proposal that U.S. DOT needs to begin anew. Cook Inletkeeper and the Pipeline Safety Trust believe there are strong safety and environmental rationales for PHMSA to issue a final rule requiring all low-pressure transmission pipelines to meet existing transmission pipeline standards.

What's unusual about BP's current situation is that the company – and Cook Inletkeeper and the Pipeline Safety Trust commend it for this – admits fault for its technical and related financial misjudgments with respect to its North Slope "transit" pipelines. Let's learn from this situation and make certain it does not happen again by ensuring that no low-pressure pipelines remain unregulated.

Thank you very much for your attention to these concerns.